IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-2. Cancel

3. (Currently Amended) A scanning optical microscope comprising: ~~according to claim 1 or 2,~~

a light source;

a wavefront converting element for applying a desired wavefront conversion to illuminating light emitted from said light source;

an objective for collecting wavefront-converted illuminating light emerging from said wavefront converting element onto a sample;

a detector for detecting signal light emitted from said sample; and

an actuator for scanning said objective along a direction perpendicular to an optical axis,

wherein when said actuator scans one section of the sample perpendicular to the optical axis with said objective, said wavefront converting element applies a constant wavefront conversion to said illuminating light, and

wherein when an amount of movement of said objective along a direction perpendicular to the optical axis is denoted by ΔX, the following condition (1) is satisfied:

$$\Delta X \leqq 0.66 f_{OB} \cdot \lambda / (\Delta Z \cdot NA^4) \qquad \cdots (1)$$

where:

f_{OB}: a focal length of the objective;

ΔZ: an amount of focal point movement caused by the wavefront converting element;

λ: a wavelength of the illuminating light;

NA: a numerical aperture of the objective.

4-10. (Cancel)

11. (New) A scanning optical microscope comprising:

a light source;

a wavefront converting element for applying a desired wavefront conversion to illuminating light emitted from said light source;

an objective for collecting wavefront-converted illuminating light emerging from said wavefront converting element onto a sample;

a detector for detecting signal light emitted from said sample; and

an actuator for scanning said objective along a direction perpendicular to an optical axis,

wherein when an amount of movement of said objective along a direction perpendicular to the optical axis is denoted by AX, the following condition (1) is satisfied:

$$\Delta X \leqq 0.66 f_{OB} \cdot \lambda / (\Delta Z \cdot NA^4) \qquad (1)$$

where:

f_{OB}: a focal length of the objective;

ΔZ: an amount of focal point movement caused by the wavefront converting element;

λ: a wavelength of the illuminating light;

NA: a numerical aperture of the objective.